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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/468,673 12/21/99 TAYLOR

D 97223D

020306 HM12/0319
MCDONNELL BOEHNEN HULBERT & BERGHOFF
300 SOUTH WACKER DRIVE
SUITE 3200
CHICAGO IL 60006

EXAMINER

PADMANABHAN, K

ART UNIT

PAPER NUMBER

1641

DATE MAILED:

03/19/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 09/468,673	Applicant(s) TAYLOR, D LANSING	
	Examiner Kartic Padmanabhan	Art Unit 1641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 9-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 9-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 1999 is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- | | |
|--|--|
| 15) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 18) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 16) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 19) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 17) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 20) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Drawings

2. This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

Specification

3. The use of the trademarks GENECHIP, FLIPR, and ARRAYSCAN have been noted in this application. They should be capitalized wherever they appear and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. Claims 1 and 9-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
6. Claim 1 recites the limitation "the controlled array of cell types" in lines 5-6 of the claim. There is insufficient antecedent basis for this limitation in the claim. In addition, this limitation infers the presence of multiple cell types, but this limitation has not been recited in the claim. Furthermore, the term "controlled" is vague and indefinite, as it is unclear if applicant intends to claim an ordered array of cells, wherein the cells have a predetermined position, or a random ordering of the cells, wherein only the cell types have been predetermined.
7. Claim 9 is vague and indefinite, as the claim does not end in a period. Therefore, it is unclear if the claim ends with "reservoirs" or if applicant omitted a part of the claim.
8. Claim 12 is vague and indefinite due to the recitation of "domains". Since each microfluidic channel provides fluid to an individual domain, this limitation is unclear.
9. Claims 16-17 are vague with respect to the recitation of "controlled" as discussed above.
10. Claim 18 is vague and indefinite, as the claim does not end in a period. Therefore, it is unclear if the claim ends with "reservoirs" or if applicant omitted a part of the claim.
11. Claim 21 is vague and indefinite due to the recitation of "domains". Since each microfluidic channel provides fluid to an individual domain, this limitation is unclear.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 1 and 9-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Wilding et al. (US Pat. 5,587,128). Wilding et al. disclose a mesoscale amplification device comprising microfluidic channels and reaction chambers designed and fabricated from solid substrates using established micromachining techniques, such as etching. The mesoscale flow system, of the reference also includes flow channels and reaction chambers, which are constructed into the surface of the substrate. In addition, the system has a detection region comprising a series of channels of monolithographic arrays, as well as a plurality of reaction and detection chambers. In addition, the device includes channels for removing products or waste material from the device. The reference also discloses that the dimensions of the reaction chambers to which the flow channels lead are smaller than the reaction chambers.

Allowable Subject Matter

14. Claims 12-22 are allowable over the prior art of record.

15. The following is a statement of reasons for the indication of allowable subject matter:

The claimed invention is drawn to a cassette for cell screening comprising the a base having surface containing cell binding sites, located in wells, for various cell types. The cassette further comprises a fluid delivery system comprising a chamber, wherein the chamber comprises multiple domains and microfluidic channels. The closest prior art of record fail to disclose or teach all the limitations of the claimed invention, thereby rendering claims 12-22 novel and unobvious.

16. Claim 17 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

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17. Claims 12-16 and 18-22 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

18. Since allowable subject matter has been indicated, applicant is encouraged to submit formal drawings in response to this Office Action. The early submission of formal drawings will permit the Office to review the drawings for acceptability and to resolve any informalities remaining therein before the application is passed to issue. This will avoid possible delays in the issue process.

Conclusion

Claims 1 and 9-22 are rejected.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Schroeder et al., Winkler et al., Chang, Grenner, Akong et al., Dovichi et al., Lockhart et al., Zanzucchi et al., and Hozier all teach various cell screening devices comprising the use of microfluidics.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kartic Padmanabhan whose telephone number is 703-305-0509. The examiner can normally be reached on M-F (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on 703-305-3399. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-4243 for regular communications and 703-305-3014 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

Kartic Padmanabhan

Patent Examiner

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March 14, 2001



CHRISTOPHER L. CHIN
PRIMARY EXAMINER
GROUP 1800-1641